

# Research on the Influence of Individual Household Consumption Credit on Consumption Behavior

-- Empirical Analysis Based on CHFS Data

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**Abstract:** Consumer credit generally refers to the loans provided by commercial Banks or other types of financial institutions to consumers for their daily expenditure, purchase of household appliances, furniture, electronic products and even personal or children's development and other daily consumption. In recent years, consumer credit in our country gradually popularization, its role of promoting consumption and drive economic growth increasingly significant, but our country consumer credit as a share of GDP is still low, is not match with the consumption of our country, and for a long time, our country is the main purpose of consumer credit in the field of real estate, therefore, in this paper, we study whether consumer loans affect individual or household consumption behavior, whether this influence there is a difference between urban and rural areas. This article through to the southwest university of finance and China family financial investigation and research center (CHFS) in 2017, the data filter, using the ordinary least squares (OLS) regression, researched on the relation between consumer credit and household consumption behavior, consumer credit on consumer spending does have a positive role in promoting, and there is a difference in town and country, and puts forward some Suggestions on the results of the study.

## 1. Introduction

Due to the continuous development of the socialist market economy in China, the total amount of household consumption has been greatly increased. In order to better meet the needs of consumers and further promote the development of the national economy, the banking industry keeps innovating to meet the needs of consumers. Therefore, individual household consumption credit arises at the historic moment, and in the process of its development is divided into different kinds, through data statistics show that in recent years, the overall housing consumption loan, auto consumption credit, student loan as the main representative, and its proportion is still in the rapid expansion, so this thesis under the background, on the basis of the present situation of market economy for a study of a series of problems.

China's economic growth has slowed since the new normal. Therefore, stimulating the consumption potential of residents and seeking for new economic growth points has become an important direction of China's economic development. At present, China's traditional consumption of economic development to promote the role of gradually weakened, credit consumption role is difficult to play<sup>[1]</sup>. In this context, it is of great significance to analyze the relationship between consumer credit and consumer behavior to promote China's economic development. As far as the current situation is concerned, individual household consumer credit has a very broad development prospect in China, but many problems still need to be solved urgently. So this article is based on our current economic models and development prospects, and a comprehensive domestic and foreign existing related theory and the theory of the corresponding analysis and summary, and contact the current consumer behavior to carry on the empirical analysis, to explore the individual, the family of consumer credit and consumer behavior relationship, in order to put forward some Suggestions on individual household consumption behavior.

## 2. Question Raising

Before analyzing the business of personal consumption credit in China, it is necessary to understand the concept and situation of personal consumption credit. Personal consumption credit, also can be regarded as a personal credit loan, namely consumer is when the revenue forecast more optimistic for the future with its own credit or the relevant financial institutions to apply for a loan from the bank in order to meet the current consumption desire of a form of business, the name is not the same, but because of the difference between different appellation is feeble.

Personal consumer credit business is operated through the following process: first, the credit subject, that is, the consumer determines that he/she needs to apply for a certain amount of credit to meet his/her current consumption demand, declares to the relevant bank and provides relevant documents. The bank will conduct investigation according to relevant documents and conduct internal audit after the completion of the loan investigation report. When the audit passes, it will sign certain mortgage and notarization procedures with the consumer. After the consumer obtains the use money, according to the contract, the consumer shall pay a certain amount of interest on the use funds to the bank. From this point of view, the main body of credit mainly includes the two sides of loan and loan, the supplier is commercial Banks and all kinds of related financial institutions, and the demander is mainly consumers and families with demand. In other words, credit can also be understood as the allocation of funds between the demander and the supplier.

In 1999, the government promulgated the "guidance on developing personal consumption credit business"<sup>[2]</sup>. With the support and promotion of relevant national policies, China's consumer credit business has developed rapidly. Statistical data show that as of October 2018, the consumer credit consumer loans (residents) accounted for 27.6% of the proportion of domestic loans for size is 37 trillion Yuan, including short-term loans and long-term consumption loans of 8.5 trillion Yuan and 28 trillion Yuan respectively, accounting for the proportion of domestic loans were 6.3% and 21.2% respectively, is our country consumer credit scale and the per capita consumption credit amount have achieved substantial increase; Meanwhile, the ratio of consumer credit to GDP rose from 1.57% in 1999 to 12.32% in 2017 (excluding housing loans). If contain mortgages in 2017, the proportion of residents' consumption in GDP of 53.6%, its share has been for five consecutive years by more than 50%<sup>[3]</sup>. In 2017, consumer credit in traditional financial institutions increased by 3.89 trillion Yuan, the highest increase in history, and the balance reached 9.80 trillion Yuan at the end of 2017. In addition, in the guidance, the personal housing loans of borrowers are extended to various types of housing loans for their own use. In order to meet the needs of consumers as soon as possible, the bank is vigorously developing personal consumption loans and also subdividing them to optimize the credit structure. At present, the usefulness of personal consumption credit in our country mainly in personal housing loan, for "big head", in personal car loans, personal loans and credit card payment for the three "auxiliary", countries after January 1, 2017 and adopted a policy of personal consumption have a credit card from the fine for delaying payment, such policies to promote the diversification, diversification of consumption of payment mode in our country, greatly improve the consciousness of residents' consumption and the production capacity of the enterprise. These measures are aimed at expanding domestic demand and stimulating domestic enterprise production through the government's policy of macro-control, so as to realize the further development of the national economy.

Throughout the development process of personal consumption credit, with the gradual development of the economy, its business division is increasingly diversified. Up to now, China's personal consumption credit business has been divided into personal housing loans, personal comprehensive consumer loans, personal home decoration loans, personal loans and personal auto loans as the main loans of a variety of business. At the same time, the country's various credit cards, as well as Internet credit cards, are becoming more widespread as residents become more aware of their consumption, such as the more popular among young people ants spend and borrow, Jingdong Ious, etc, are the present hot microfinance APP, in which the ants spend since it opened in April 2015, the number of users has exceeded 100 million, and among many users, the post-90s users

account for nearly 50% <sup>[4]</sup>, more than 4 million businesses have been opened, in pay treasure of transactions are accounted for about 20% of the share <sup>[5]</sup>, this kind of online credit lending method not only appears in the eyes of consumers in a more direct and convenient way, but also makes people prefer it because of its convenience and shortcut, which greatly promotes the current consumer expenditure. Therefore, the forms and types of personal consumption credit are various, after all, personal consumption credit on China's consumer spending and consumption behavior what impact? In what ways? Many scholars mainly focus on macro data <sup>[6]</sup>, a few papers focus on credit card limit <sup>[7]</sup>, and this paper will study the above problems from the perspective of micro household data, the regions were divided into rural areas and urban areas for research <sup>[8,9]</sup>, hoping to contribute to the development of related consumer credit.

### 3. Data Selection and Model Construction

Referring to previous literature, the data used in this paper came from the Chinese family finance survey (CHFS2017) conducted by the China family finance survey and research center of southwestern university of finance and economics in 2017. The survey was based on the sample survey data collected from 29 provinces (autonomous regions and municipalities directly under the central government), 172 cities and 355 counties, and involved various related information of micro households in 2017, including household assets, liabilities and credit constraints, income, consumption, social security and insurance, demographic characteristics, employment and payment habits. From the perspective of survey scope, survey method and sample size, the data of CHFS2017 is highly representative. So this article on the basis of the database, Reference to previous studies <sup>[10][11][2][12]</sup>, eliminated some abnormal values, including family income less than 1000 RMB, Monthly consumption expenditure and annual consumption expenditure is less than 0 or equal to 0 households, and weed out the sample of households larger than 10, because if there are too many family members, family consumption decision-making will become blurred, eventually lead to consumer behavior can't accurately measure; In addition, the sample with the age of household head less than 18 years old was also excluded, because the current situation of using children's names to buy housing is of little significance to this study, so it was excluded. Finally, 4799 valid samples were retained, including 1,724 urban samples and 3,075 rural samples. A variable model was established to conduct an empirical study on the relationship between household consumption credit and household consumption expenditure changes.

As for the model setting, this paper selects the total household consumption expenditure as the explained variable. Explanatory variables were selected as the total family income, whether the family has consumer credit, age, gender, marital status, years of education, health, employment and family size (number of members). The model is set as follows:

$$\ln C = \alpha_0 + \alpha_1 \ln Y + \alpha_2 L + \alpha_3 X + \varepsilon \quad (1)$$

Where, C is the total household consumption, Y is the total household income, L is the dummy variable, indicating whether there is consumer credit, with consumer credit of 1, without consumer credit of 0, X is the control variable affecting some demographic characteristics related to household consumption,  $\varepsilon$  is the error term.

First, household income is one of the most important factors influencing residents' consumption behavior. This variable can be directly obtained from the database, and the letter in the equation is Y. Secondly, since the main purpose of this paper is to study the impact of consumer credit on consumer spending, it is set as the dummy variable L. If there are outstanding amounts in housing loans, auto loans, student loans, credit card consumer loans, other loans, etc., set the dummy variable as 1; otherwise, set it as 0. Through screening, there were 682 samples of consumer credit, the rest without consumer credit; Gender was set as dummy variable, if the head of household was male, the variable was 1, and if the head of household was female, the variable was 0. If the marital status is married, make 1 and the rest make 0; By fixed number of year of the education, in the questionnaire of Chinese family finance, education level are divided into haven't been to school, elementary school, junior high school, high school, secondary vocational schools and colleges of

higher vocational, undergraduate, postgraduate, doctoral nine categories, this paper to convert it into the education fixed number of year, respectively 0, 6, 9, 12, 12, 15, 16, 19, 23 years; Very good health and good health were set to 1, and set the rest to 0; Employment order is 1, other orders are 0; The family size is measured by the number of family members, which is 1-10 because families with more than 10 members have been excluded before.

Descriptive statistics were conducted for the selected variables, and the variable name, definition and descriptive statistical results were obtained in table 1 below.

Table 1 Descriptive statistics of variables

Variable	Observations	Mean value	Standard Deviation	Minimum	Maximum
Total household consumption expenditure(C)	4799	65152.06	73864.25	1894	1000000
Total household income(Y)	4799	109414.6	220704.9	1000	5000000
Whether there is consumer credit(L)	4799	0.142	0.349	0	1
The householder age	4798	52.907	13.426	20	95
Gender of head of household	4799	0.829	0.377	0	1
Marital status of the head	4799	0.899	0.300	0	1
The length of schooling of the head of the household	4976	9.053	4.008	0	23
The health of the head of the household	4798	0.475	0.499	0	1
The head of the household employment	4799	0.701	0.458	0	1
Family size	4799	1.726	1.139	1	10

As can be seen from table 1, the standard deviation of household income and consumption expenditure in China is large, and the minimum and maximum values are far from each other, which may reflect that the gap between the rich and the poor is still large in China. However, the average value of consumer credit is only 0.142, which reflects that the current household consumption concept is relatively conservative. The proportion of households willing to increase consumption through loans is still small, and residents' consumption awareness still needs to be further improved. The age of the head of the household is about 53 years old, but the average length of education is only 9 years, which reflects that the basic education level of Chinese residents is still low, and the corresponding risk appetite and risk tolerance capacity are also poor, which may also

lead to the majority of households do not take consumer credit to some extent.

#### 4. Empirical Results and Analysis

Table 2 Regression results of all samples

Variable	Model1	Model2	Model3
	lnC	lnC	lnC
Total household income(lnY)	0.340***		0.279***
Whether there is consumer credit(L)	0.213***	0.151***	0.150***
The householder age		-0.018***	-0.010***
Gender of head of household		-0.186***	-0.054***
Marital status of the head		0.065***	0.132***
The length of schooling of the head of the household		0.092***	0.059***
The health of the head of the household		0.196**	0.068**
The head of the household employment		-0.364***	-0.224***
Family size		0.083***	0.078***
_cons	6.996***	10.880***	7.615***
Observations(N)	4799	4796	4796
R-squared	0.9959	0.9955	0.9962
Adj R-squared	0.9959	0.9954	0.9962

Note: \*\*\*, \*\* and \* in the table indicate significance at 1%, 5% and 10% significance levels, respectively. The same below.

The regression results in table 2 are the results estimated by ordinary least squares (OLS). Through the white test, it was found that there was heteroscedasticity in this model, so the heteroscedasticity of the data was corrected. It can be seen that in model 1, the variable of total household income is controlled, and only one dummy variable of consumer credit is considered. Consumer credit L has a significant positive correlation with household consumption expenditure, which is significant at the level of 1%. In model 2, the influence of consumer credit and other control variables on consumer expenditure is studied. It can be seen that consumer credit has a positive correlation with consumer expenditure and the effect is very significant. At the same time, among the control variables of some demographic characteristics, the positive effect of marital status is the largest, which may be due to the increase in the cost of children after marriage, which leads to the increase of household consumption expenditure and the tendency to adopt the

consumption credit. Model 3 included the control variables of all demographic characteristics, consumer credit and total income into the equation, and the result did not change significantly. The promotion effect of consumer credit on household consumption expenditure remained unchanged.

In conclusion, it can be seen from the results of several models that whether consumer credit occurs or not has a significant positive impact on the total consumption of households, that is, households with consumer credit have higher total consumption expenditure. This may be because the occurrence of consumer credit will directly expand the scale of consumer spending or accelerate the growth of consumer spending. What cannot be ignored is that the impact of household income is relatively large. Although the analysis results show that consumer credit has a certain promoting effect on consumption expenditure, its impact is still weaker than resident income, indicating that increasing income to stimulate household consumption is still the most effective means. As for the other control variables, the higher the educational level and health level of the household head, the larger the family size and the younger the family members are, the higher the consumption level.

So, is there a difference in consumer spending behavior between urban and rural households? In this paper, the sample data will be divided into urban and rural areas according to the type of household registration for further study.

Table 3 Descriptive statistics of regional variables

Variable	Rural areas			Urban areas		
	Observations	Mean Value	Standard Deviation	Observations	Mean Value	Standard Deviation
Total household consumption expenditure(C)	3075	79911.12	161869.1	1724	162038.2	290814.2
Total household income(Y)	3075	52860.37	58664.58	1724	87076.05	91117.46
Whether there is consumer credit(L)	3075	0.136	0.343	1724	0.360	0.360
The householder age	3075	46.941	17.418	1723	52.503	14.843
Gender of head of household	3075	0.872	0.334	1724	0.751	0.423
Marital status of the head	3075	0.909	0.288	1724	0.882	0.322
The length of schooling of the head of the household	3073	7.752	3.405	1723	11.372	3.954
The health of the head of the household	3075	0.429	0.495	1723	0.557	0.497
The head of the household employment	3075	0.776	0.417	1724	0.568	0.496
Family size	3075	1.825	1.226	1724	1.549	0.941

Table 3 lists the relevant indicators of samples from rural areas and urban areas, in terms of family income and expenditure, we can see clearly the differences between urban and rural areas, The annual income of urban households is more than twice that of rural ones, total expenditure also much more than in rural areas, to some extent, this reflects the imbalance of income and expenditure between urban and rural areas; In terms of consumer credit, there is little difference between rural and urban areas. Urban areas are slightly higher than rural areas, which reflects the

current household consumption concept is keeping pace with the times. Rural areas have also actively changed their consumption concept and are willing to carry out consumer credit. In terms of the number of years of education, there is a big difference between urban and rural areas. In rural areas, the average years of schooling is 8 years, with junior middle school level, while in urban areas, it is about 11 years, with senior middle school level, reflecting that the unbalanced phenomenon of China's current education development still exists.

Table 4 Regression results of samples in different regions

Variable	Rural areas		Urban areas	
	Model1 lnC	Model 2 lnC	Model 1 lnC	Model 2 lnC
Total household income(lnY)	0.265***	0.220***	0.399***	0.353***
Whether there is consumer credit(L)	0.228***	0.169***	0.165***	0.114***
The householder age		-0.016***		-0.003***
Gender of head of household		0.018		-0.048
Marital status of the head		0.116***		0.208
The length of schooling of the head of the household		0.034***		0.041***
The health of the head of the household		0.073		0.019
The head of the household employment		-0.176***		-0.026***
Family size		0.102***		0.041***
_cons	7.702***	8.420***	6.477***	6.716***
Observation(N)	3075	3075	1724	1723
R-squared	0.9955	0.9957	0.9971	0.9972
Adj R-squared	0.9954	0.9957	0.9971	0.9972

Table 4 shows the regression results of various variables in rural areas and urban areas. It can be seen that, no matter in urban or rural areas, household consumption has a significant sensitivity to the total income of households and whether households have consumer credit. However, in terms of the coefficient of consumer credit, it is higher in rural areas than in urban areas. In rural areas, it was 0.169, while in urban areas, it was only 0.114, indicating that in rural areas, the promotion effect of consumer credit on consumption expenditure was better than in urban areas. According to our usual understanding, in more developed areas such as urban areas, more consumer credit should be issued and the promotion effect should be better, while in rural areas, where the economy is underdeveloped and the financial and economic development is poor, there should be less consumer credit, the regression results appear in contrast to the usual understanding may be due to the proportion of urban residents consumption credit the highest housing consumption loan is not included in the calculation of urban household consumption, but rural family housing construction, maintenance, expansion and other charges will be included in the category of rural household consumption, largely reduces the urban household consumption credit impact on consumer

spending. Health status and family size have a greater impact on consumer spending in rural areas than in urban areas, which may be due to the large family size and underdeveloped basic medical care in rural areas. Therefore, it is more desirable to increase expenditure through consumer credit, get better health care. In addition, family size has a significant positive impact on consumption in both rural and urban areas. Households with a large population spend more on all aspects, so their consumption level is higher than those with a small population.

## 5. Conclusions and Suggestions

This paper analyzes the current situation of personal consumption, analyzes the relationship between consumer credit and consumer behavior through the CHFS2017 database, and summarizes the previous discussion. The main conclusions are as follows:

(1) Through the test of consumer credit and consumption expenditure on selected samples, it is found that consumer credit can indeed promote the increase of total consumption expenditure of individuals and families. Specifically, if only the total income of families is controlled, the effect of consumer credit on consumption expenditure is 0.213; if other control variables are included, it is 0.150. The health status, married status, education level and family size of the household all had significant positive effects on consumption expenditure.

(2) The samples were further divided into rural residents and urban residents for regression analysis and comparison. We can know that there is still a large gap between consumption and income levels in rural and urban areas. Although the influence of consumer credit on consumer spending is significantly positive, it has a greater impact in rural areas.

Based on the above conclusions, this paper puts forward the following Suggestions:

(1) To strengthen consumers' effective demand for consumer credit. Strengthening consumer guide, borrowing from countries like the United States, encourage the traditional consumption patterns to further advance the change of consumption patterns, But at the same time, consumer education should also be strengthened to prevent the excessive expansion of consumer credit caused by excessive consumer spending, which will lead to financial risks like the subprime crisis in 2008, to guide consumers to correctly view the development of consumer credit and the correct use of consumer credit.

(2) Further improve the living standards of urban and rural residents and raise their incomes. Consumer credit is actually a way to consume the expected income in advance, so having a high and stable income is an important guarantee for the development of consumer credit. Especially in rural areas, more measures should be taken to ensure and improve the living standards of farmers, narrow the income gap between urban and rural areas, and build a beautiful new countryside.

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